



Core Routing and Switching



Cisco on Cisco – Executive Module
Version 7.0, Q1, FY'07



Core Routing and Switching



Executive Summary

Cisco All Packet Summary

Common Enterprise Wide Infrastructure, 300 Sites: 2923 Switches and 2136 Routers, 2510 ECT Routers



Core Switch :
Cisco Catalyst
6500 Series
Switch

Edge switches :
Cisco Catalyst
6500, 3750 Series
Switches



Core : Cisco 6500
Series Router

Edge : Cisco
3700 / 3800
Series Multi-
service Platform



WAN access :
Cisco 7200/7600
Series Router

OC-12 / STM-4 /
OC-3 / STM-1 /
DS-3 WAN
backbone



Service provider
MPLS IP-VPN
network in
EMEA



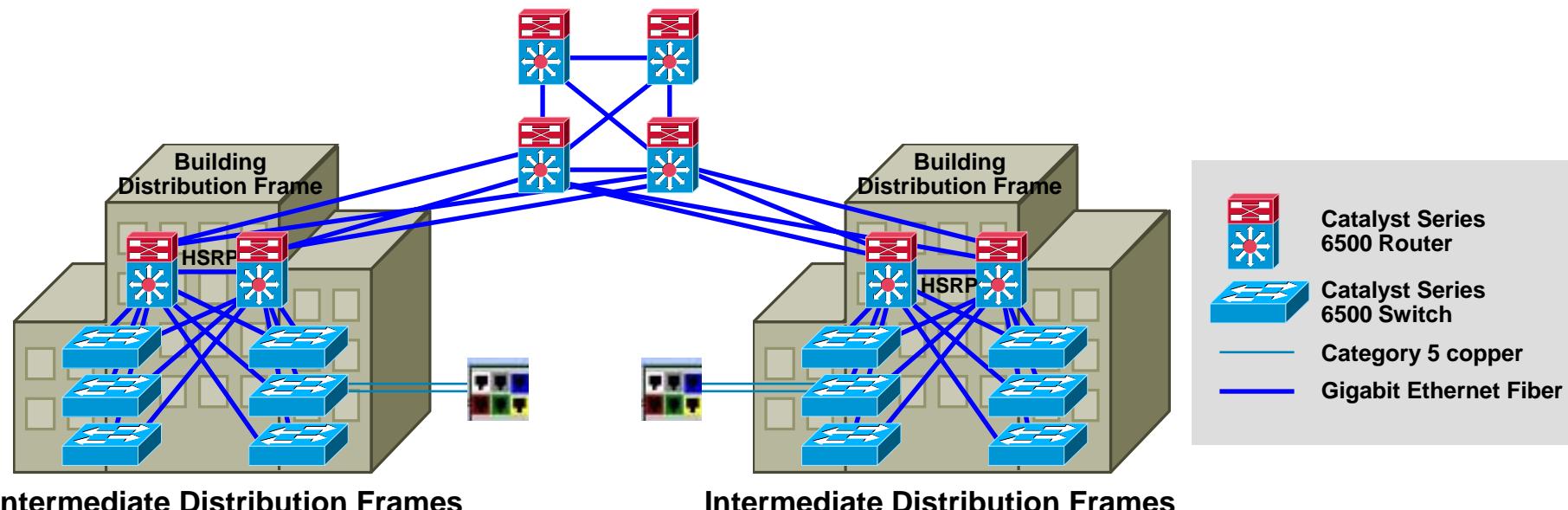
5 Enterprise
Production Data
Centers

Data Centers (Today and Future)

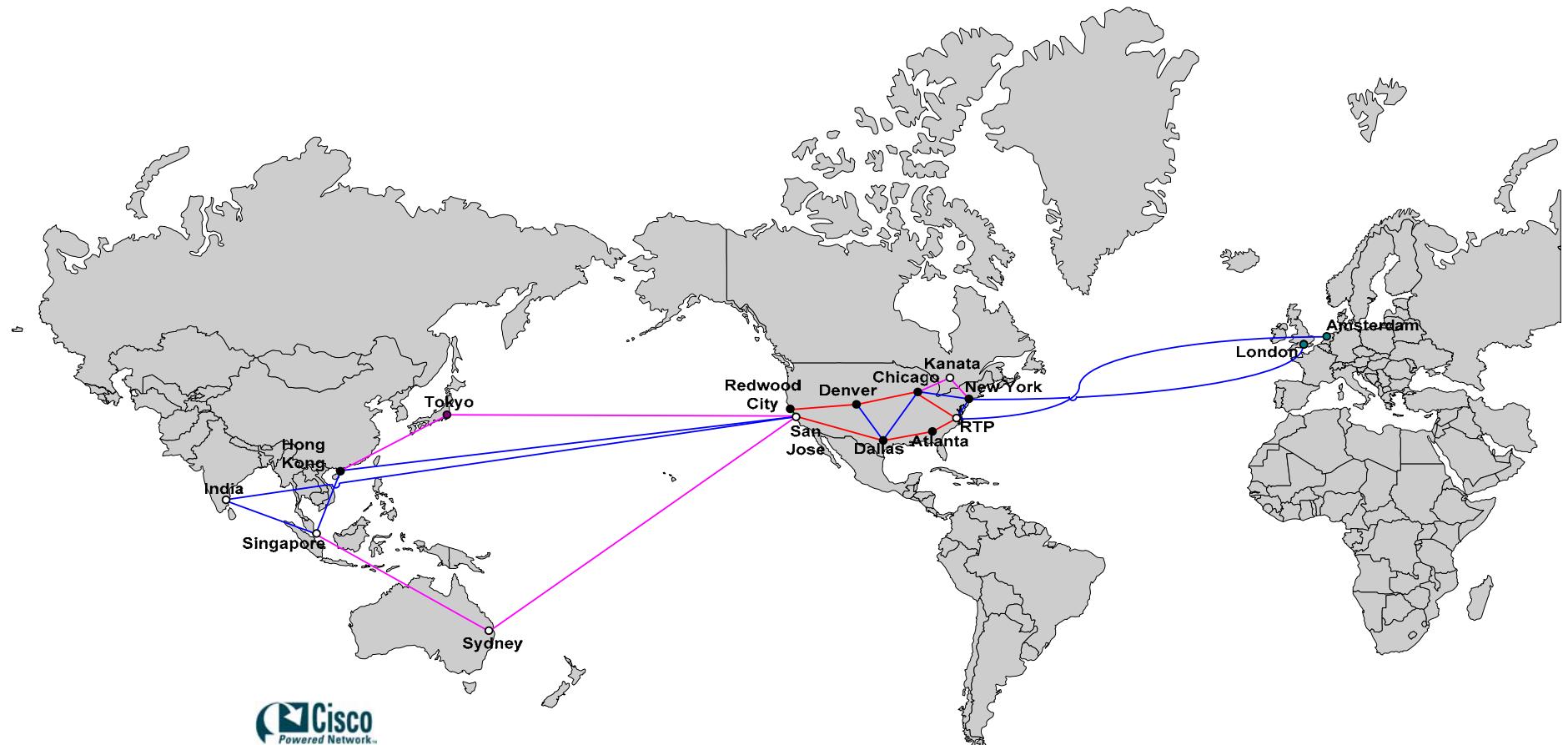


Campus

- Gigabit Ethernet and 10 Gig E in campus core; 10/100 Gigabit Ethernet to desktop
- Cisco Catalyst 6500 Series Router as an edge-to-core platform using both switching and routing capability
- Campus network design uses duplexed equipment and circuits to avoid single point of failure



CAPNet: Cisco All Packet Network



CAPNet 2005

Legend

| | |
|--|------------------------------|
| | Gigabit Ethernet |
| | OC12 |
| | OC3 |
| | DS3 |
| | Cisco Facility |
| | AT&T Co-Location Facility |
| | C&W Co-Location Facility |
| | Equinix Co-Location Facility |

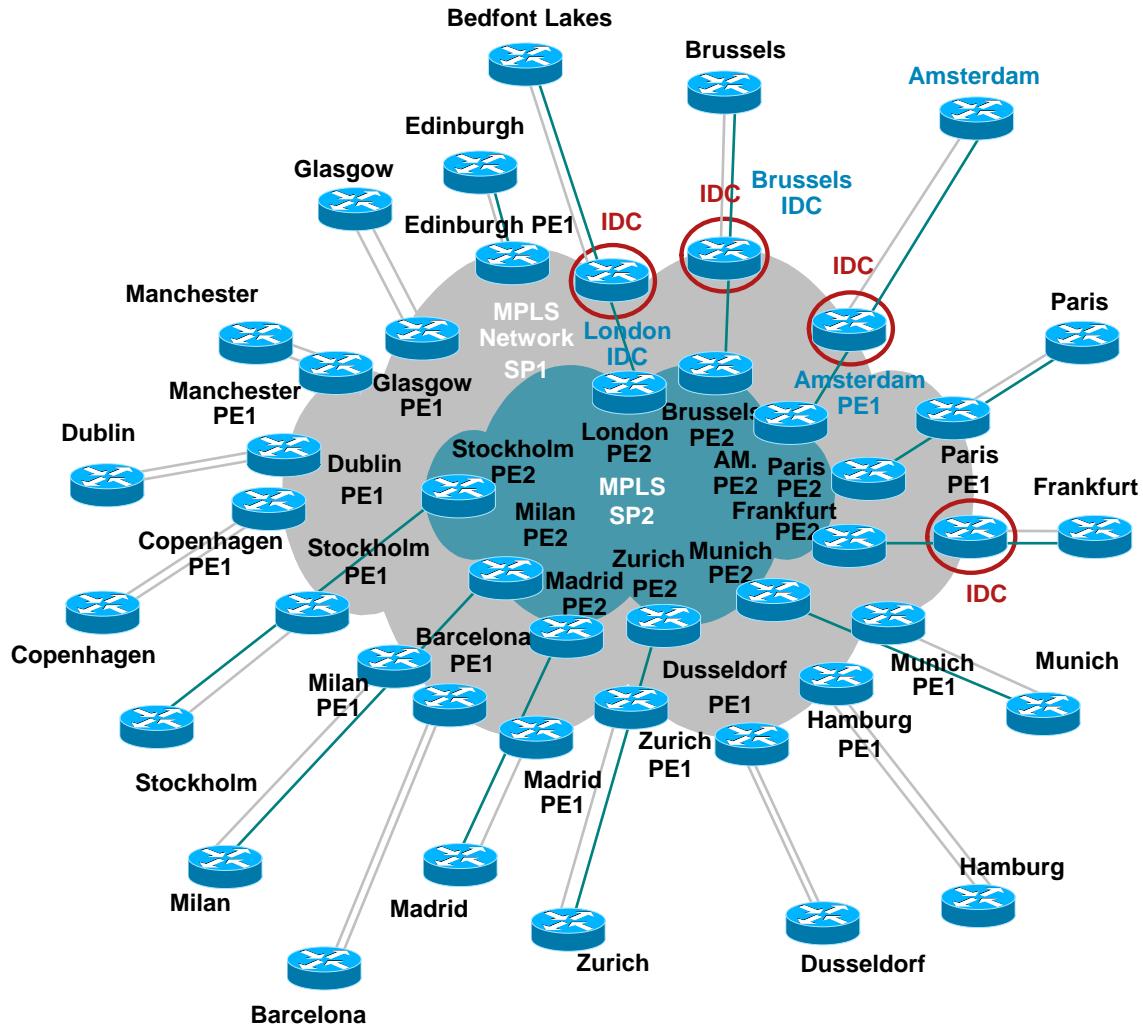
EMEA Intelligent Network Infrastructure

Transport

- Any to any
- Provides security, QoS, multicast, and resiliency

Services

- Enables voice, video, and peering applications
- Access to new services—IP—PSTN, Internet



Routing and Switching at Cisco

| Past | Present | Future |
|---|---|--|
| <ul style="list-style-type: none">▪ Spoke-and-hub WAN architecture▪ The beginnings of IP convergence▪ <u>All PBX infrastructure</u>▪ <u>Early WLAN deployment</u>▪ <u>Limited storage network</u> | <ul style="list-style-type: none">▪ Peer-to-peer network architecture▪ Converged voice, video, and data network▪ Intelligent network services▪ <u>Storage Area Networks (SANs) span thousands of miles with FCIP</u>▪ Network Admission Control (NAC)▪ <u>IIN & SONA</u> | <ul style="list-style-type: none">▪ Full vision of IIN & SONA▪ GSRs in the Internet Gateway▪ POE upgrade from Cisco prestandard to IEEE 802.3af.▪ Application Aware QoS v2▪ Upgrade of 1000+ Edge & L3 Switches, Data Center Network and Branch Office |

Core Routing & Switching – Sound Bite Summary

Productivity



- Latency minimized through 'shortest path' any-to-any topology, enhancing end user experience.

Operational Excellence



- MPLS VPN = 1 connection to network providing flexible office adds and moves

Cost Savings



- MPLS VPN = 4X bandwidth at no extra cost
- International VoIP calling
- Overall cost reduction of 23% through modernized IP network.
- Highly adaptive routing and switching with high-value software platform optimize long-term network business value and cost effectively manage growth.

More INTERNAL Routing & Switching Resources



Case Studies

http://wwwin.cisco.com/it/technology/at_work/rout-cs.shtml



Question Forum (Answers from the Experts)

http://iforums.cisco.com/iforum/servlet/SCom?page=scom&folderID=caw&TOPICID=.ee77358&CommCmd=MB?cmd=display_messages&mode=new&location=.ee77358



Operational Practices & Design Guides

Operational Practices - http://wwwin.cisco.com/it/technology/at_work/rout-wp.shtml

Design Guides - http://wwwin.cisco.com/it/technology/at_work/dg_routing_switching.shtml



Product & Solutions Deployment Status

http://wwwin-tools.cisco.com/it-gss/cw_pa/home.do?currentAction=getTechnologyDetails&strTechID=1



ORDER Resources for you and your customer

<http://wwwin.cisco.com/it/oncisco/collateral/index.shtml>

More EXTERNAL Routing and Switching Resources



Case Studies

http://www.cisco.com/web/about/ciscoitatwork/case_studies/routing.html



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Technology Seminars (VoDs, PDFs and Transcripts available)

http://www.cisco.com/web/about/ciscoitatwork/tech_seminar.html

